REMARKS

Reconsideration of the patent application in view of the preceding amendments and the following remarks is respectfully requested.

**Amendments to the Drawings**

The applicants have amendment the drawings to cure minor informalities. No new matter has been added to the amended drawings. The Applicants respectfully request approval of the proposed amended drawings.

**Objection To The Specification - Claim of Priority**

In the office action dated 8/5/2003, the Examiner objected to the written specification. In the office action dated 8/5/2003, the Examiner noted and acknowledged the Applicants claim of priority. The Applicants have amendment the written specification to include the claim of priority. Withdrawal of the objection to the specification is respectfully requested.

**Rejection of the Claims Under 35 U.S.C. § 102**

In the office action dated 8/5/2003, the Examiner rejected claims under 35 U.S.C. § 102. The Examiner stated that the claimed invention was anticipated by U.S.

patent 6,430,729 issued to Dewey, et al. (hereinafter referred to as the Dewey, et al. reference). The Applicants respectfully traverse.

The present invention concerns a very complex system for performing extraction on integrated circuit designs. Specifically, the present invention concerns an extraction system that operates using machine learning models that have been trained in a specific manner.

A number of different machine learning techniques have been developed over the years. After researching various different methods, a Bayesian inference method was selected to perform machine learning. Details on Bayesian inference can be found on pages 24 to 27 of the present patent application. The process of using Bayesian inference to perform machine learning requires extremely difficult integrations to be performed. Symbolic evaluation of the integrals that must be performed for Bayesian learning is generally not possible. And even performing numerical computation to evaluate the integrals Bayesian learning is extremely difficult. The difficult extraction problems with many parameters cause the integrals to have high dimensions. Solving such inference problems, even with numerical evaluations, becomes very difficult with such unwieldy high-dimension integrals.

One of the methods, disclosed and claimed in this application, uses a Monte Carlo method to solve such complex integral problems. The Monte Carlo method simplifies the complex numerical evaluation of the high-dimension integrals by using random sampling. Details on the method Monte Carlo method disclose and claimed are set forth in pages 27 to 30 of the written specification.

The Dewey, et al. reference cited by the Examiner discloses a process and system for maintaining 3 sigma process tolerance for parasitic extraction with on-the-fly biasing. However, the does not calculate at least one electrical characteristic using a "machine-learning model" (such as a neural network) to perform the extraction. And since there is no machine-learning model involved, there is certainly no machine-learning model that is "trained with Bayesian inference implemented with a Monte Carlo method" as required by independent claims 1 and 11 of the present invention. Since the cited references do not disclose the extraction system of the present invention that operates using a machine learning model trained with Bayesian inference implemented with a Monte Carlo method, independent claims 1 and 11 of the present invention are not anticipated by the cited art. The remaining dependent claims incorporation all the limitations of the independent claims and are thus likewise allowable.

## CONCLUSION

In view of the foregoing, it is submitted that the claims are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance is earnestly solicited at the earliest possible date.

Respectfully submitted,

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